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ABSTRACT

The 1983-84 Chapter II Reading and Mathematics Lab Program of the Des Moines (Iowa) Independent Community School District is evaluated in this report. The first section describes the program. Topics covered include the history of the program, the educational activities carried out under its aegis, how instruction was organized, theories utilized in the program, inservice activities, and parent contact and participation. Section two deals with the program's budget and expenditures. The results of the evaluation are presented in section three, with separate discussions of the extent to which the performance and process objectives of the reading lab program and the mathematics lab program were achieved. Section four contains comments on the evaluation, while section five advances recommendations for improving the program. (RBW)

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REPORT OF EVALUATION

Reading/Mathematics Lab Program
Chapter II, E.C.I.A.

1983-84

Department of Evaluation, Research and Testing
Des Moines Independent Community School District
1800 Grand Avenue
Des Moines, IA 50307-3382

John F. Tompkins
Program Evaluator

Approved: Morris D. Wilson

Morris D. Wilson, Ph.D.
Director of Evaluation, Research and Testing

September 27, 1984

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DES MOINES INDEPENDENT COMMUNITY SCHOOL DISTRICT
DEPARTMENT OF EVALUATION, RESEARCH AND TESTING
EVALUATION ABSTRACT

September 27, 1984

PROJECT TITLE:	Reading/Mathematics Lab Program
COORDINATOR:	Mary J. Wagner
STAFF:	.5 Coordinator 13.0 Reading Teachers (FTE) 5.5 Math Teachers (FTE) (FTE = Fulltime Equivalency)
OPERATIONAL SITES:	Adams (reading only), Garton, Greenwood (reading only), Hanawalt, Hubbell (reading only), Moore, Windsor (reading only), Woodlawn, Brody (reading only), Meredith, Merrill, Hoover (reading only), North (reading only), Roosevelt (reading only) - Eight elementary, three transitional, and three senior high buildings
POPULATION SERVED: (80 days or more)	Reading 610 students Math 250 students Total duplicated count = 860 students Some students were served in both reading and math labs and were counted twice.
FUNDING:	SOURCE: Chapter II, E.C.I.A. and local Amount Budgeted: $433,147.00 Amount Expended: $399,244.40 (as of July 17, 1984, as provided by the Office of Intercultural Programs)
COST PER PUPIL:	A total of 860 students were served for 80 days or more. The cost per pupil as of this date was $464.24

COMMENTS:

1. Students served in the mathematics program achieved an increase in percentile rank at all grade levels on the mathematics section of the ITBS between pre and posttesting. In the reading program, increases in percentile rank occured at all levels except for 4th grade (reading comprehension test only) and 7th grade (vocabulary test only).

2. Students in grades 10 through 12 increased their average percentile rank between pre and posttesting with the Degrees of Power Reading Test. The average percentile rank for students in grade nine remained the same. Any increase in percentile rank between pre and posttesting may be due in part to the impact of program instruction.

3. Students in the Reading Lab portion of the program achieved 88.3 percent of the objectives introduced to them in their individual educational plans.

4. Program teachers continued to exert considerable effort in making personal contact with parents of students served. Particularly noteworthy was the fact that during the second semester parents of 87.2 percent of the students in the Reading Lab Program and parents of 85.8 percent of students in the Mathematics Lab Program were contacted in person or via the telephone.

RECOMMENDATIONS:

1. Program administration should modify the criterion level for contacts with parents of students new to the program (as opposed to those who have been previously served). The amount of contact with parents of new students should be greater than for the total group as it is assumed this group would be least knowledgeable about the program. As the objective is written presently, less contact with parents of new students is expected. In addition, a more specific criterion level for achievement of first grade students in the Reading Lab program as measured by the Systematic Approach to Reading Improvement (SARI) system should be established.

2. Program administration should seriously consider revision of the student performance objectives so that the normal curve equivalent (NCE) scale rather than the percentile rank scale is used to measure gains of students between pre and posttesting. Because it is an equal interval scale with arithmetic properties, the NCE provides a more accurate method of assessing the amount of growth that takes place.

3. The program coordinator should take action to determine the possible causes for the continuing decline in percent of educational plan objectives mastered by students in the Mathematics Lab Program. Action should be taken to reverse the downward trend in this area.

A copy of the complete Evaluation Report is available upon request from the Department of Evaluation, Research and Testing, 1800 Grand Avenue, Des Moines, IA 50307-3382.

I. PROGRAM DESCRIPTION

Origin of the Program

A program providing additional reading and math services to students through use of Title VI, E.S.A.A. funds was originally implemented during the second semester of the 1977-78 school year. During the initial semester, the program operated at several sites that also received Title I (now known as Chapter I) services. In the fall of 1978, however, funds were used to hire staff that would serve students only at Voluntary Transfer Program sites - students that would have ordinarily qualified for Title I services at a Title I school, but who were attending another school as part of the Voluntary Transfer Program. This practice has continued since that time. Beginning with the 1982-83 school year funds for operating the program were allocated through block grant funds (Educational Consolidation Improvement Act, Chapter II) and by the Voluntary Transfer Program. The program is known as the Reading and Math Lab Program.

Educational Activities

Prior to planning individualized programs in reading, teachers used tests to diagnose individual reading deficiencies in addition to those used in needs assessment. Some of the tests used included the following: Informal Reading Inventory, Spache Diagnostic Reading Scales, Informal Phonics Survey, Durrell Listening Test, and the Ekwall Reading Inventory.

Program teachers used a variety of techniques and materials to supplement the reading instruction provided by regular classroom teachers. In Grade 1, the Waupun Strategies in Early Childhood Education objectives were followed until completion of the auditory verbal and visual verbal objectives. When this occurred and the student was considered to be

ready for formal reading instruction, the Systematic Approach to Reading Improvement (SARI) management system was used. This management system is based upon performance objectives and uses criterion referenced tests for determining mastery. For grades 6-8, the district's basal reading objectives were used.

The objective of the program design is to expedite individually guided instruction for reading skill development. Educational plans detailed the sequence of objectives introduced and achieved by each student. These plans were maintained by the teachers and monitored by the program coordinator. For grades 9-12 the district's secondary reading objectives were used as guidelines for instructional objectives being taught. Group charts were maintained by program teachers and monitored by the program coordinator.

Student team learning situations which reflected a multicultural, nonsexist approach were implemented throughout the 1983-84 school year by the Reading and Mathematics Lab Program teachers. Students were encouraged to assume leadership roles and interact positively with their peers while striving for established group goals based on their academic objectives. The program coordinator monitored these activities. Written lesson plans were submitted as documentation for the activity.

Organization for Instruction

Reading

Reading teachers instructed small groups of students for about 150 minutes per group weekly at the elementary level and from about 165 minutes to 215 minutes per group weekly at the secondary level (depending on building). The elementary and secondary teacher-student ratios ranged from 1-10 during each instructional period, with each teacher instructing a maximum of 45 students daily. At the secondary level approximately 45

students were served by each teacher on a daily basis and up to 60 students were served if classes met on alternate days. Approximately 90 students were served at North High School. This was done so as to not alter a special reading program in place at this building that was not funded by Chapter II until the 1983-84 school year. Elementary students receiving Reading Lab services had reading instruction from both the classroom teacher and the Chapter II reading teacher. Instruction by the lab teacher took place in a designated reading area.

Secondary students received reading instruction in small group classes in addition to regular attendance in English or reading classes. Students were scheduled into Reading Lab classes from study halls or classes other than English or reading. The major purpose of the secondary program was to provide students who were not functioning appropriately in academic achievement an opportunity which would lead to full participation in the regular school program.

Mathematics

Each program math teacher instructed a maximum of 45 students with each elementary pupil receiving approximately 150 minutes of instruction weekly and each secondary pupil receiving about 215 minutes of instruction per week. Math teachers provided supplemental instruction on the concepts or skills presented by the classroom teacher according to one of the following modes:

a. During regular math periods: 50% of the period daily or 100% of the period on alternating days,

or

b. During periods other than the regular math periods.

As in the reading program, lab teachers organized their groups in such a manner that students residing in the school attendance area were served simultaneously with the Voluntary Transfer Program students.

This was done to insure that transfer students were not segregated in the receiving school.

Program Enrollment

Exhibits 1 and 2 below show the buildings with a lab program in reading and/or mathematics, the fulltime equivalency of the lab staff at each building and the number of students served, both voluntary transfer and local neighborhood. The figures include only students who were enrolled 80 days or more according to records kept by each teacher.

EXHIBIT 1

Students Served--Reading Lab Program

School	Teacher FTE	VTP Students	Neighborhood Students	Total Students
Adams	0.5	6	14	20
Garton	1.0	16	28	44
Greenwood	1.0	23	18	41
Hanawalt	0.5	13	9	22
Hubbell	.5	7	13	20
Moore	1.0	16	24	40
Woodlawn	1.5	36	31	67
Windsor	1.0	29	13	42
Brody	1.0	20	26	46
Meredith	1.0	23	17	40
Merrill	1.0	35	8	43
Hoover	1.0	19	25	44
Roosevelt	1.0	16	34	50
North	1.0	--	--	91
All Schools	13.0	259	260	610

EXHIBIT 2

Students Served--Math Lab Program

School	Teacher FTE	VTP Students	Neighborhood Students	Total Students
Garton	1.0	19	26	45
Hanawalt	0.5	12	10	22
Moore	1.0	18	24	42
Woodlawn	1.5	20	31	51
Meredith	1.0	24	18	42
Merrill	1.0	21	27	48
All Schools	6.0	114	136	250

In addition to the 19.0 teaching positions, there was a halftime coordinator position for this program. This created a total fulltime equivalency staff of 19.5. Teachers were encouraged to serve students from both the attendance area of the program buildings (neighborhood students) and those attending their building as a result of the Voluntary Transfer Program (VTP) on an approximately equal basis in numbers. As shown in the above exhibits, students were split quite evenly between these two categories when total program enrollment is considered, even though there were a few instances of considerable variation within buildings. This was not a consideration in selection of students for the North High program.

Theories Utilized in the Program

Instructional techniques used in the Reading and Mathematics Lab Program borrow heavily from theories developed by individuals such as Piaget, Bruner, Skinner, Maslow, Glasser, and Dienes.

In summary, the theories emphasize:

a. Children learn in different ways in different periods of cognitive development. Since most of the children in elementary schools are in Piaget's concrete operational period the appropriate instructional technique is to provide experiences for the student with concrete objects. Further experiences at the representational level must be programmed before expecting children to operate with concepts at the abstract level.

b. Children must conserve attributes (number, mass, distance, volume) before concepts involving those attributes can be learned.

c. The ideas of assimilation, accommodation and the principle of multiple embodiment imply that children need many concrete experiences and time to grasp concepts and skills before mastery can be expected.

d. Children must be active participants in their own learning.

e. The concept of readiness operates at all stages of learning.

f. Students' self-concepts and expectations for themselves are related to their achievement.

g. Teacher expectations for and attitudes toward students affect student performance.

Inservice Activities

Various inservice activities were conducted throughout the 1983-84 school year. Due to the similarities between the lab and Chapter I programs, the lab program staff attended some of the same sessions as the Chapter I program teachers. During the school year, the staff participated in meetings on content, methodology, testing and organizational procedures. These meetings were conducted as needed by the program coordinator. Lab program teachers attended local or regional professional meetings as funds permitted. The opportunity for teacher participation in inservice presentations provided professional growth experiences for program teachers. Teachers also conducted informational meetings within their buildings to familiarize staff with lab program procedures, goals, and objectives. The program coordinator assisted in this building communication.

Parent Contact and Participation

A major effort was made to communicate with the parents of students served by the program. To accomplish this, Reading and Mathematics Lab personnel engaged in the following activities:

a. made home visits;

b. invited parents of participating students by letter, telephone or in person to visit and/or assist in their son's or daughter's class;

c. invited parents to conferences and open house functions by letter, telephone or in person.

In order to successfully complete parent contacts, program teachers were not scheduled for instructional duties one-half day bi-monthly during the first semester in order to confer with parents and/or arrange for conferences. This half day was also used by teachers for activities such as testing, inservice meetings and working with classroom teachers.

II. BUDGET AND EXPENDITURES

Funding for this program was provided through provisions of the Education Consolidation and Improvement Act (E.C.I.A.) - Chapter II and the district budget for the Voluntary Transfer Program. Data for Exhibit 3 was provided by the Office of Intercultural Programs. Their information was in the form of financial accounting ledger sheets provided by the Controller's Office as of July 17, 1984.

As can be seen from Exhibit 3, a total of $399,244.40 was expended for operation of this program. The amount expended represented 92.2 percent of the amount budgeted. With a count of 860 students served in the Reading and Math Labs for 80 days or more, the cost per pupil was $464.24.

EXHIBIT 3

Budget and Expenditures*

Category	E.C.I.A. (Chapter II)		District		Total	
	Budgeted	Expended	Budgeted	Expended	Budgeted	Expended
Salaries and Benefits	$222,030.00	$193,962.92	$196,017.00	$194,411.57	$418,047.00	$388,374.49
Inservice Training	3,000.00	411.77			3,000.00	411.77
Travel	2,000.00	439.35			2,000.00	439.35
Supplies	3,500.00	3,418.79			3,500.00	3,418.79
Evaluation	6,600.00	6,600.00			6,600.00	6,600.00
Total	$237,130.00	$204,832.83	$196,017.00	$194,411.57	$433,147.00	$399,244.40

*Figures provided by the Office of Intercultural Programs as of July 17, 1984.

III. RESULTS OF EVALUATION

During the 1983-84 school year, two process and four performance objectives were used in evaluation of the Reading Lab Program. In the mathematics components there were two process and three performance objectives. The process objectives dealt with various activities carried out by the program teachers while performance objectives dealt with learning outcomes of students. Although the reading and mathematics projects are covered by separate sets of objectives, they will be dealt with jointly in this evaluation report due to the similarity in the design and activities of the two programs.

An accountability file was prepared for the project in order to facilitate the collection and storage of supportive data for each objective. This file was maintained in the office of the project coordinator at Meredith Junior High School, with a duplicate copy in the Department of Evaluation, Research and Testing.

As previously stated, objectives for both the reading and mathematics project appear in this report. Performance and process objectives for the reading program will be listed first followed by those for the mathematics program. Each objective will be quoted, followed by the evaluation pertaining to that objective. A summary of the major comments and recommendations appear in the final section of this report.

Performance Objectives - Reading Lab Program

1. At the end of the instruction year, lab students in grades 2-8 enrolled in the program a minimum of 80 days will demonstrate an increase in the average percentile rank from pre to posttest on the vocabulary and comprehension subtests of the Iowa Tests of Basic Skills.

   DOCUMENTATION: Iowa Tests of Basic Skills scores from the fall and spring testing submitted to the Director of Evaluation, Research and Testing at the end of the program year.

Table 1 indicates the average percentile rank on the Iowa Tests of Basic Skills for reading/mathematics lab program students who completed both a pre and posttest. Results for both the vocabulary and reading comprehension subtests are shown.

TABLE 1

Iowa Tests of Basic Skills
Pre/Post Results (Percentile Rank)
Vocabulary and Reading Comprehension
1983-84

Grade	N	Vocabulary			Reading Comprehension		
		Pre	Post	Gain	Pre	Post	Gain
2	56	27	44	+17	25	49	+24
3	41	18	33	+15	21	35	+14
4	31	26	34	+ 8	30	30	0
5	33	32	40	+ 8	29	39	+10
6	53	23	26	+ 3	20	31	+11
7	50	29	29	0	26	31	+ 5
8	None served						

As can be seen from Table 1, students at each grade level, with the exception of grade 7, displayed an increase in percentile rank between pre and posttesting on the vocabulary subtest. The same was true on the reading comprehension subtest with the exception of students at grade 4. At these grades, students achieved the same percentile rank on the pre/post measure for the subtest indicated. It would be expected that without impact of a special program students would maintain the same percentile rank from the pre to the posttest, indicating that their standing in comparison to the norming group would not change. Any increase in the percentile rank indicates a change in the position of this group in comparison with the norming group. To simplify, an increase in percentile rank indicates "growth" which may be attributed to factors such as a remedial program.

Another unit that may be used to measure pre/post growth is the normal curve equivalent (NCE). The district's Chapter I programs adopted this metric several years ago in response to a directive that stated this unit would be used nationally to measure achievement of Chapter I students.

The NCE scale is somewhat similar to the percentile rank scale, yet contains properties that make it much better for assessing growth of students who have fallen behind in academic achievement. This is primarily due to the fact that unlike the percentile rank scale, this is an "equal interval" scale. An increase of 4 units on the equal interval NCE scale (from 20 to 24) means the same amount of change as an increase of 4 points from 44 to 48. On the percentile scale, this is not necessarily the case as the intervals between units are not arithmetically equal. The end result is that with the NCE scale, a criterion for amount of growth expected (in NCE units) can be specified. With the percentile rank scale, we can look only for an increase in the percentile rank, not for a quantitative increase of a specified number of units.

Due to the factors mentioned above, it is recommended that the Reading/Math Lab program write student performance objectives specifying growth expected on the ITBS using the NCE scale rather than the percentile rank scale. The Department of Evaluation, Research and Testing will assist as needed in accomplishing this. As written, this objective was achieved.

2. At the end of the instruction year, first grade students enrolled in the lab program a minimum of 80 days will have passed 5 out of 6 SARI (Systematic Approach to Reading Improvement) level 2 pre and posttests.

DOCUMENTATION: SARI scores submitted to the Director of Evaluation, Research and Testing at the end of the program year.

Records indicating the number of level 2 Systematic Approach to Reading Improvement (SARI) pre and posttests passed by the end of the first grade year were maintained by each teacher. The data submitted listed a total of 69 first grade students. Data submitted from Windsor was not used in analysis as it could not be interpreted in the form in which it was submitted. The information received indicated that 62 students or 89.9 percent of the total number of students had passed 5 of the 6 tests. Many students had passed all 6 of the level 2 tests and had, therefore, progressed to the next level.

As only a very few students passed fewer than the five subtests required, this objective was achieved. It is recommended, however, that this objective include a specific criterion as to the number or percent of students expected to pass a certain number of the pre and posttests. Without this indicated there is a tendency to interpret the objective as saying that all students (100 percent) must pass a certain number of tests even though this is probably idealistic.

3. At the end of the instruction year lab students in grades 9-12 enrolled in the program a minimum of 80 days will demonstrate an increase in the percentile rank on the Degrees of Reading Power Test.

DOCUMENTATION: Degrees of Reading Power Test scores from the fall and spring testing submitted to the Director of Evaluation, Research and Testing at the end of the program year.

The 1983-84 school year marked the initial year the Degrees of Reading Power Test, published by College Board, was used to evaluate reading

improvement of senior high in this program. Previously, the Iowa Tests of Educational Development (ITED) had been used for this purpose. The Degrees of Reading Power Test had previously been used in this program as a diagnostic tool. There are several scales available with this test which, the publishers claim, are very useful in correctly placing students for instructional purposes. In addition, the instrument has been normed for both fall and spring testing and percentile rank scales have been developed in order to measure growth. Students in the Reading Lab Program still take the Iowa Tests of Educational Development in October with all other students. The Degree of Reading Power Test is administered to students in the Reading Lab Program in November and May according to the norming dates.

Table 2 shows results obtained from pre and posttesting with the Degrees of Reading Power Test at each of the three senior high buildings serving students in this program. Results are reported by grade within each building as well as for each grade across the three buildings. Results, which are given as percentiles, are reported only for students who completed this test in November and May.

TABLE 2

Degrees of Reading Power Test Results
Reading Lab Program - Grades 9-12
1983-84

School	Grade 9				Grade 10				Grade 11				Grade 12			
	N	Pre	Post	Gain	N	Pre	Post	Gain	N	Pre	Post	Gain	N	Pre	Post	Gain
Hoover	17	36	31	-5	5	27	29	+2	6	29	34	+5	2	50	55	+5
North	13	38	38	0	10	29	29	0	14	21	26	+5	17	6	8	+2
Roosevelt	13	26	33	+7	8	38	50	+12	7	28	34	+6	2	19	26	+7
All Schools	43	33	33	0	23	31	36	+5	27	25	29	+4	21	9	13	+4

As can be seen from Table 2, program students increased their percentile rank between pre and posttesting on the Degrees of Reading Power Test at all grades except ninth. Grade nine students attained the same percentile in the fall and spring. Ninth grade students at one building showed a decrease in the percentile rank from fall to spring. Except for grade nine, this objective was achieved.

It is recommended that in 1984-85 the program administration use the normal curve equivalent scale (NCE) to specify the amount of growth expected for students taking this test. This should be used in lieu of the percentile rank. The reader may refer to the narrative under student performance objective #1 for further discussion.

4. Students in grades 1-12 enrolled in the program a minimum of 80 days will demonstrate reading proficiency by mastering an average of 80 percent of the reading objectives introduced to them on their educational plans.

   DOCUMENTATION: semester summary report submitted at the end of the year to the program coordinator. Educational plans on file with the reading lab teacher.

Table 3 presents data on objectives introduced to and achieved by students in the Reading Lab Program. The objectives presented are a part of each student's individual educational plan. Only data for students enrolled 80 days or more are reported.

TABLE 3

Reading Objectives Introduced and Attained

School	Grade	N	Average Number of Objectives Introduced	Percent Attained
Adams	1	8	29	94.8
	2	2	31	98.4
	3	4	38	95.4
	4	1	18	94.4
	5	3	27	86.4
	1-5	18	30	94.1
Garton	1	12	19	84.4
	2	10	28	91.7
	3	6	22	89.9
	4	0		
	5	16	18	98.9
	1-5	44	21	91.9
Greenwood	1	13	24	86.6
	2	13	24	94.2
	3	6	23	90.6
	4	5	22	82.4
	5	3	18	90.6
	1-5	40	23	89.5
Hanawalt	1	6	28	81.4
	2	5	36	79.3
	3	2	35	81.4
	4	7	37	77.5
	5	0		
	1-5	20	34	79.4
Hubbell	1	5	16	88.9
	2	8	26	97.1
	3	5	31	91.6
	4	4	18	90.0
	5	1	18	88.9
	1-5	23	23	93.0
Moore	1	14	25	99.1
	2	7	25	90.9
	3	10	31	69.6
	4	3	28	61.2
	5	8	22	64.7
	1-5	42	26	81.0

(continued)

TABLE 3 (continued)

School	Grade	N	Average Number of Objectives Introduced	Percent Attained
Windsor	1	11	10	100.0
	2	6	18	98.2
	3	14	11	85.0
	4	9	13	94.9
	5	1	13	69.2
	1-5	41	12	92.9
Woodlawn	1	27	15	92.3
	2	24	22	93.1
	3	11	16	87.2
	4	12	14	93.5
	5	9	12	90.0
	1-5	83	17	91.9
Brody	6	29	19	84.7
	7	14	19	88.9
	8	0		
	6-8	43	19	86.1
Meredith	6	22	22	81.6
	7	20	24	90.1
	8	0		
	6-8	42	23	85.8
Merrill	6	21	18	68.3
	7	17	18	79.2
	8	0		
	6-8	38	18	73.2
Hoover	9	25	17	82.8
	10	12	14	90.7
	11	11	16	93.6
	12	3	17	96.0
	9-12	51	16	87.6
North	9	21	20	97.1
	10	20	15	95.5
	11	20	20	94.9
	12	22	18	95.0
	9-12	83	18	95.6
Roosevelt	9	24	8	91.1
	10	12	8	86.5
	11	10	8	90.0
	12	5	8	90.0
	9-12	51	8	89.7

Composite Data

Grade	N	Average Number of Objectives Introduced	Percent Attained
1	96	20	91.3
2	75	25	92.5
3	58	22	84.5
4	41	20	83.6
5	41	18	86.7
6	72	19	79.3
7	51	21	86.6
8	0		
9	70	15	90.1
10	44	13	92.5
11	41	16	94.0
12	30	16	94.7
1-12	619	19	88.3

This objective was achieved. Program students achieved 88.3 percent of the objectives introduced to them. When examining the data by grade level, it can be seen that only in grade 6 did the percent of mastery fall below the 80 percent criterion level to 79.3 - less than 1 percent below the level specified in the objective. It might also be noted that at Hanawalt, Moore, Windsor and Merrill, students at some grade levels did not achieve a mastery level of 80 percent. Only at Hanawalt did the percent of mastery fall below 80 percent when all students from that building are included.

Process Objectives - Reading Lab Program

1. First semester program teachers will have had personal contact (at home, school or other prearranged location) with parents of at least 75 percent of the total number of students enrolled in the program for a minimum of 80 days and 65 percent of the students new to the program.

   Second semester this personal contact may include telephone contacts.

   DOCUMENTATION: parent contact report on the semester summary submitted to the program coordinator and the Department of Evaluation, Research and Testing with the January accountability data.

Tables 4 and 5 report data on parent contacts for the first and second semester respectively. The discussion following the tables related to data from both semesters.

TABLE 4

Reading Parent Contacts
First Semester

School	Number of Students	Number Contacted Personally*	Percent	Number of new Students	Number Contacted Personally	Percent	Total Contacts**
Adams	16	15	93.8	16	15	93.8	15
Garton	39	35	89.7	14	12	85.7	51
Greenwood	40	37	92.5	27	24	88.9	39
Hanawalt	21	17	81.8	13	9	71.4	31
Hubbell	22	18	81.8	10	10	100.0	21
Moore	38	36	94.7	16	13	81.3	73
Windsor	37	22	59.5	25	15	60.0	32
Woodlawn	72	69	95.8	35	35	100.0	96
Brody	43	37	86.0	43	37	86.0	39
Meredith	39	32	82.1	39	32	82.1	45
Merrill	38	27	71.1	38	27	71.1	35
Hoover	32	23	71.9	22	14	63.6	42
North	77	59	76.6	33	28	84.8	61
Roosevelt	34	28	82.4	14	12	85.7	105
All Schools	548	455	83.0	345	283	82.0	685

*Personal contacts during the first semester include those made through home visits or visits to school by parents. Telephone calls made by the teacher to the home are not included during this semester.

**Total contacts includes categories above plus telephone calls and other communications; i.e., letters.

TABLE 5

Reading Parent Contacts
Second Semester

School	Number of Students	Number Contacted Personally*	Percent	Total Contacts**
Adams	18	17	94.4	17
Garton	41	36	87.8	39
Greenwood	40	28	70.0	36
Hanawalt	19	18	94.7	18
Hubbell	22	22	100.0	22
Moore	42	41	97.6	66
Windsor	40	31	77.5	31
Woodlawn	80	70	87.5	87
Brody	38	25	65.8	25
Meredith	43	39	90.7	49
Merrill	36	30	83.3	41
Hoover	46	35	76.1	55
North	64	63	98.4	93
Roosevelt	47	47	100.0	52
All Schools	576	502	87.2	631

*Personal contacts during the second semester include those made through home visits, visits to school by parents and telephone calls made by the teacher to the home.

**Total contacts includes categories above plus other communications; i.e., letters.

Reading Lab Program teachers were successful in establishing personal contacts with parents of students they served to a high degree as indicated by the results presented in Tables 4 and 5. Parents of 83.0 percent of the students served were contacted personally during the first semester. Parents of 82.0 percent of students who were new to the program were contacted. The criterion levels were 75 percent and 65 percent respectively. During the second semester, the parents of 87.2 percent of the students served were contacted personally. The criterion level for second semester contacts was 75 percent of the parents of all students. Results by building presented in the tables indicated that in a few instances the criterion levels were not achieved at specific

buildings. These included Windsor, Merrill, and Hoover during the first semester and Greenwood and Brody during the second semester. It should be noted that in no cases did the level of contact fall greatly below that indicated in the objective.

The wording of this objective states that parents of 65 percent of the students new to the program will be contacted as compared to 75 percent of the parents of the total group. It would seem logical that the effort to contact parents of the subgroup classified as new students should be at least the same if not greater than that for students who have been in the program previously. The parents of new students would likely be the ones that would benefit most from information provided by the teacher. It is recommended that the criterion level for visits to parents of new students be adjusted to a level that exceeds, rather than falls below, that required for the total group.

2. Student team learning concepts and procedures reflecting a multicultural, nonsexist approach are to be incorporated into lab program instruction.

   DOCUMENTATION: specific lesson plans submitted to the program coordinator and the Department of Evaluation, Research and Testing.

For the past three years Reading Lab teachers have incorporated team learning concepts using a multicultural, nonsexist approach in their instruction. While it is assumed that this type of instruction occurs regularly, teachers were asked to submit as documentation a lesson plan outlining a specific lesson presented. Lesson plans were received from all teachers. A form provided by the project coordinator assisted teachers in planning the activity which, in most cases, spanned one week of instructional time. A review of the lesson plans submitted revealed the planning and implementation of a variety of activities

that consistently emphasized student planning, working together and reward for successful completion of the activity. This objective was achieved.

Performance Objectives - Mathematics Lab Program

1. At the end of the instruction year, lab students in grades 2-8 enrolled in the program a minimum of 80 days will demonstrate an increase in the mean percentile rank from pre to posttest on the mathematics composite score of the Iowa Tests of Basic Skills.

   DOCUMENTATION: Iowa Tests of Basic Skills scores from the fall and spring testing submitted to the Director of Evaluation, Research and Testing at the end of the program year.

Table 6 exhibits the average percentile rank on the Iowa Tests of Basic Skills for reading/mathematics lab program students who completed both a pre and posttest. Results shown are for the mathematics composite scores attained.

TABLE 6

Iowa Tests of Basic Skills
Pre/Post Results (Percentile Rank)
Mathematics Composite Score
1983-84

Grade	N	Pre	Post	Gain
2	27	16	25	+ 9
3	24	19	30	+11
4	17	27	35	+ 8
5	44	45	49	+ 4
6	35	31	39	+ 8
7	32	25	34	+ 9
8	None served			

As can be seen from the data in Table 6, students at all grade levels increased in percentile rank between pre and posttesting. The discussion which fellows the evaluation of student performance objective #1 for the reading lab program earlier in this report as well as the recommendation

suggesting use of the normal curve equivalent (NCE) rather than the percentile rank for measuring growth applies to the mathematics lab program as well. This objective was achieved.

2. At the end of the instruction year, at least 70 percent of the first grade students enrolled in the program a minimum of 80 days will have achieved a score of 26 or above on the Mathematics Test for Performance Objectives.

   DOCUMENTATION: Mathematics Test for Performance Objectives scores submitted to the Director of Evaluation, Research and Testing at the end of the program year.

All first grade students in the district complete the district objectives-based mathematics test in May of each year. In the Mathematics Lab Program, as well as in the Chapter I Mathematics Program, results from these tests are an important element in the selection of students for participation in these programs during the following school year.

Eighteen first grade students served by the program completed the mathematics objectives-based test. The average score achieved by these students was 30.44 or 76.1 percent of the 40 items answered correctly. Seventeen of the eighteen students in the program (94.4 percent) answered twenty-six or more of the items correctly, which far surpassed the criterion estabished by the objective. This objective was achieved.

3. Students in grades 1-8 enrolled in the program a mimumum of 80 days will demonstrate mathematics proficiency by mastering 80 percent of the objectives presented to them on their educational plans.

   DOCUMENTATION: semester summary report submitted at the end of the year to the program coordinator. Educational plans on file with the Mathematics Lab teacher.

Table 7 presents data on objectives introduced and achieved by students in the Mathematics Lab Program. The objectives presented are part of each student's individual educational plan. Data are reported only for students enrolled 80 days or more.

TABLE 7

Objectives Introduced and Attained

School	Grade	N	Average Number of Objectives Introduced	Percent Attained
Garton	1	7	36	79.6
	2	12	51	83.4
	3	12	48	83.9
	4	5	56	79.9
	5	7	64	85.8
	1-5	43	50	83.2
Hanawalt	1	6	38	67.7
	2	4	31	73.0
	3	3	31	77.7
	4	4	29	80.3
	5	4	37	86.5
	1-5	21	34	76.0
Moore	1	0		
	2	7	44	72.8
	3	5	40	62.4
	4	8	46	73.3
	5	22	54	74.8
	1-5	42	49	73.0
Woodlawn	1	5	28	65.9
	2	5	30	65.3
	3	3	34	78.4
	4	7	36	60.3
	5	20	35	63.8
	1-5	40	33	64.7
Meredith	6	19	40	32.5
	7	21	41	39.1
	8	0		
	6-8	40	41	36.0
Merrill	6	27	53	86.8
	7	19	53	88.7
	8	1	49	87.8
	6-8	47	53	87.6

Composite Data

Grade	N	Average Number of Objectives Introduced	Percent Attained
1	18	34	72.1
2	28	42	77.3
3	23	42	78.3
4	24	42	72.7
5	53	47	74.4
6	46	48	67.9
7	40	47	65.7
8	1	49	87.8
1-8	233	45	71.9

Based upon the data in Table 7 and the composite data immediately following, this objective was not achieved. Students in grades 1-8 achieved 71.9 percent of the objectives introduced to them as compared to a level of 80 percent specified in the objective. Only at Garton and Merrill did the data generated from all students served at those buildings indicate a mastery level exceeding 80 percent of the objectives introduced. Historically, the Mathematics Lab Program has had a lower rate of objectives attainment than the Reading Lab Program. Of particular concern, however, is the fact that the rate of attainment of objectives within the Mathematics Lab Program has declined for the second consecutive year. During the 1981-82 school year, students mastered 82.5 percent of the objectives presented to them. This rate declined to 80.5 percent in 1982-83 followed by 71.9 percent in 1983-84. It is recommended that the program coordinator take action to determine the possible causes for the decline and institute whatever actions are necessary to reverse the downward trend in this area.

Process Objectives - Mathematics Lab Program

1. First semester program teachers will have had personal contact (at home, school, or other prearranged location, with parents of at least 75 percent of the total number of students enrolled in the program for a minimum of 80 days and 65 percent of the students new to the program.

   Second semester this personal contact may include telephone contacts.

   DOCUMENTATION: parent contact report on the semester summary submitted to the program coordinator and the Department of Evaluation, Research and Testing with the January accountability data.

Tables 8 and 9 report data for the first and second semester respectively. The discussion following the tables relates to data from both semesters.

TABLE 8

Mathematics Parent Contacts
First Semester

School	Number of Students	Number Contacted Personally*	Percent	Number of new Students	Number Contacted Personally	Percent	Total Contacts**
Garton	40	23	57.5	35	19	55.6	28
Hanawalt	21	18	85.7	14	11	78.6	23
Moore	40	35	87.5	23	19	82.6	43
Woodlawn	35	30	85.7	13	10	76.9	37
Meredith	37	19	51.4	17	8	47.1	22
Merrill	39	27	69.2	39	27	69.2	31
All Schools	212	152	71.7	141	94	66.7	184

*Personal contacts during the first semester include those made through home visits or visits to school by parents. Telephone calls made by the teacher to the home are not included during this semester.

**Total contacts includes categories above plus telephone calls and other communications; i.e., letters.

TABLE 9

Mathematics Parent Contacts
Second Semester

School	Number of Students	Number Contacted Personally*	Percent	Total Contacts**
Garton	43	36	83.7	36
Hanawalt	21	15	71.4	15
Moore	42	38	90.5	38
Woodlawn	39	32	82.1	38
Meredith	38	34	89.5	54
Merrill	36	33	91.7	36
All Schools	219	188	85.8	217

*Personal contacts during the second semester include those made through home visits, visits to school by parents and telephone calls made by the teacher to the home.

**Total contacts includes categories above plus other communications; i.e., letters.

Program teachers contacted parents of students they served during both semesters. The objective specified slightly different criteria for fall and spring semester contacts. During the first semester, teachers were expected to personally contact parents of 75 percent of the total group of students they served. Furthermore, contacts were to be made with parents of 65 percent of the students new to the program. Table 8 shows that 71.7 percent and 66.7 percent in these two categories were contacted during the first semester. During the second semester, 75 percent of the total group was again to be contacted personally. The major difference in the criteria between semesters was that telephone calls to the homes of students were counted as personal contacts during the second semester, but not during the first semester. In the spring, teachers contacted parents of 85.8 percent of the students, thereby surpassing the criterion level considerably. Although the number of contacts made during the first semester fell very slightly below the

specified criterion, the effort applied during the second semester resulting in the criterion being surpassed considerably results in the overall conclusion that the objective was achieved.

In the evaluation of process objective #1 in the Reading Lab Program, a recommendation was made to change the level of contact expected for parents of students new to the program. The same recommendation regarding this objective also applies to the Mathematics Lab Program.

2. Student team learning concepts and procedures reflecting a multicultural, nonsexist approach are to be incorporated into lab program instruction.

   DOCUMENTATION: specific lesson plans submitted to the program coordinator and the Department of Evaluation, Research and Testing.

Specific lesson plans were received from all Mathematics Lab Program teachers as required. The same discussion of the plans that occurred for evaluation of Reading Lab Program process objective #2 applies. This objective was achieved.

COMMENTS

1. Students served in the mathematics program achieved an increase in percentile rank at all grade levels on the mathematics section of the ITBS between pre and posttesting. In the reading program increases in percentile rank occurred at all levels except for 4th grade (reading comprehension test only) and 7th grade (vocabulary test only).
2. Students in grades 10 through 12 increased their average percentile rank between pre and posttesting with the Degrees of Power Reading Test. The average percentile rank for students in grade nine remained the same. Any increase in percentile rank between pre and posttesting may be due in part to the impact of program instruction.
3. Students in the Reading Lab portion of the program achieved 88.3 percent of the objectives introduced to them in their individual educational plans.
4. Program teachers continued to exert considerable effort in making personal contact with parents of students served. Particularly noteworthy was the fact that during the second semester parents of 87.2 percent of the students in the Reading Lab Program and parents of 85.8 percent of students in the Mathematics Lab Program were contacted in person or via the telephone.

RECOMMENDATIONS

1. Program administration should modify the criterion level for contacts with parents of students new to the program (as opposed to those who have been previously served). The amount of contact with parents of new students should be greater than for the total group as it is assumed this group would be least knowledgeable about the program. As the objective is written presently, less contact with parents of new students is expected. In addition, a more specific criterion level for achievement of first grade students in the Reading Lab program as measured by the Systematic Approach to Reading Improvement (SARI) system should be established.
2. Program administration should seriously consider revision of the student performance objectives so that the normal curve equivalent (NCE) scale rather than the percentile rank scale is used to measure gains of students between pre and posttesting. Because it is an equal interval scale with arithmetic properties, the NCE provides a more accurate method of assessing the amount of growth that takes place.
3. The program coordinator should take action to determine the possible causes for the continuing decline in percent of educational plan objectives mastered by students in the Mathematics Lab Program. Action should be taken to reverse the downward trend in this area.